



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,253	10/24/2005	Seiji Takamatsu	19291-005US1	2746
26211 7590 08/19/2008 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER				
FITZPATRICK, ATIBA O				
ART UNIT		PAPER NUMBER		
2624				
MAIL DATE		DELIVERY MODE		
08/19/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,253

Applicant(s)

TAKAMATSU ET AL.

Examiner

ATIBA O. FITZPATRICK

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 11/12/2007, 10/24/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 7 and 14 use the phrase "transparent image" but do not define this term. Also, this term is referenced in the specification, but is not defined, and it is not clear from the context how the term it should be interpreted.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-7 and 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 5, 6, 11, 12, and 13 recite the limitation "the number of pixels" in the respective second lines of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claims 7 and 14 use the phrase “transparent image” but do not define this term. Also, this term is referenced in the specification, but is not defined, and it is not clear from the context how the term it should be interpreted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 6, 8, 9, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5982473 (Miura).

As per claim 1, Miura teaches a sheet paper identification apparatus that performs identification of a sheet paper on the basis of an image of said sheet paper, the sheet paper identification apparatus comprising **(Limitations present only within the preamble are not given patentable weight):**

an image acquisition means for acquiring an image in a specified area of the sheet paper **(Miura: abstract: “image reading”; Fig. 1 and 2: 6; col 1, lines 59-67:**

“reading document images”; col 1, lines 5-10: “The present invention relates to an image reading device and an image reading method, in particular, a device and a method for breaking down image information on a document into minute areas

and reading said image information”: Note that microfilm is an example, And document is interpreted as paper.);

an image contrast analysis means for analyzing contrast of the image acquired by the image acquisition means **(Miura: abstract: “detecting the density of the document”; Fig. 2: 11 and 8; Figs. 3 and 4; Fig. 5: s1; Fig. 6: s11-s22; Fig. 7: col 2, lines 1-10: “detecting the density of said document”; col 2, lines 37-55);** and

an imaging condition adjusting means for adjusting a condition for imaging said image on the basis of a result of the contrast analysis performed by the image contrast analysis means **(Miura: abstract: “a prescan to obtain optimum reading parameters for a main scan prior to a main scan...determining the exposure amount for illuminating said document in a main scan in accordance with the detected document density, and determining a wait time to delay the start of the main scan in accordance with the determined exposure amount of the main scan”; Fig. 2: 3, 7, 8, and 11; Fig. 5: s2-s5; Figs. 6, 8-10; col 1, line 65 – col 2, line 10: “a prescan to obtain optimum image reading parameters for a main scan”).**

As per claim 2, Miura teaches the sheet paper identification apparatus according to Claim 1, wherein the image contrast analysis means comprises a means for creating a density histogram from the image acquired by said image acquisition means and analyzes the contrast of the image on the basis of the density histogram created by the histogram creation means **(Miura: abstract: “detecting the density of the document”; Fig. 2: 11 and 8; Figs. 3 and 4; Fig. 5: s1; Fig. 6: s11-s22; Fig. 7: col 2,**

lines 1-10: “detecting the density of said document”; col 2, lines 37-55).

As per claim 5, Miura teaches the sheet paper identification apparatus according to Claim 2, wherein the image contrast analysis means comprises a means for counting the number of pixels of a density value within a preset range based on said density histogram, analyzes the contrast of the image by checking whether or not the number of pixels counted by the counting means is within a preset reference range, and the imaging condition adjusting means adjusts an output of imaging means for imaging the sheet paper so that the number of pixels falls within the reference range (**Miura: col 6 line 40 – col 8, line 22; Figs. 6-10; Also, see arguments for claims 1 and 2).**

As per claim 6, arguments made in rejecting claim 5 are analogous to arguments for rejecting claim 6.

As per claim 8, arguments made in rejecting claim 1 are analogous to arguments for rejecting claim 8.

As per claim 9, arguments made in rejecting claim 2 are analogous to arguments for rejecting claim 9.

As per claim 12, arguments made in rejecting claim 5 are analogous to arguments for rejecting claim 12.

As per claim 13, arguments made in rejecting claim 6 are analogous to arguments for rejecting claim 13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5982473 (Miura) as applied to claim 2 above, and further in view of USPN 5547061 (Itako (USPN)) and JPN 02002163700 (Itako (JPN)).

As per claim 3, Miura teaches the sheet paper identification apparatus according to Claim 2, further comprising a means for judging the acquisition of an image that is in a state, which images the sheet paper, and judging an unwanted image; and judging an unwanted image based on a density histogram (Miura: col 5, lines 33-37: “selectively transmitted”; abstract: “detecting the density of the document”; Fig. 2: 11 and 8; Figs. 3 and 4; Fig. 5: s1; Fig. 6: s11-s22; Fig. 7: col 2, lines 1-10: “detecting the density of said document”; col 2, lines 37-55: Note that the prescan image is unwanted and is judged using the histogram).

Art Unit: 2624

Miura does not teach judging the acquisition of an image that is in a state where no sheet paper exists in an imaging section; and a means for prohibiting identification of the sheet paper when the judging means determines that the unwanted image exists.

Itako (USPN) teaches judging the acquisition of an image that is in a state where no sheet paper exists in an imaging section **(Itako (USPN): abstract: “currency is no longer detected by the sensors... indicate the state in which nothing is present in the currency conveyance passageway”)**.

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the teachings of Itako (USPN) into Miura since Miura suggests a document imaging and judging system in general and Itako (USPN) suggests the beneficial use of a document imaging and judging system that judges the acquisition of an image that is in a state where no sheet paper exists in an imaging section in the analogous art of image processing. It would have been obvious for one of ordinary skill in the art at the time the invention was made to implement acquisition of an image that is in a state where no sheet paper exists in an imaging section since continuing with the image processing steps would be futile if the object of interest was not present during imaging. Furthermore, one of ordinary skill in the art at the time the invention was made could have combined the elements as claimed by known methods and, in combination, each component functions the same as it does separately. One of

Art Unit: 2624

ordinary skill in the art at the time the invention was made would have recognized that the results of the combination would be predictable.

Itako (JPN) teaches judging an unwanted image based on **[the brightness and/or darkness]** of the acquired image, and a means for prohibiting identification of the sheet paper when the judging means determines that the unwanted image exists (**Itako (JPN): abstract: "a device and a method for adjusting a money identifying device... A CCD device 107 acquires the image signal of thrown-in adjustment object money, an A/D converter 108 digitally converts the image signal and outputs the image signal to a CPU 102, the CPU 102 calculates the average brightness and darkness level of the preliminarily set prescribed area of the acquired image signal, and the optical system is subjected to self-adjustment by increasing/decreasing a driving current of a LED 106 for emitting light to the adjustment object money by a prescribed amount when the calculated average brightness and darkness level is outside a preliminarily set appropriate range"**).

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the teachings of Itako (JPN) into Miura since Miura suggests a document imaging and judging system in general and Itako (JPN) suggests the beneficial use of a document imaging and judging system prohibiting identification of the sheet paper when the judging means determines that the unwanted image exists in the analogous art of image processing. It would have been obvious for one of ordinary

Art Unit: 2624

skill in the art at the time the invention was made to implement prohibiting identification of the sheet paper when the judging means determines that the unwanted image exists since continuing with the image processing steps would be futile if the image object of interest was not present. Furthermore, one of ordinary skill in the art at the time the invention was made could have combined the elements as claimed by known methods and, in combination, each component functions the same as it does separately. One of ordinary skill in the art at the time the invention was made would have recognized that the results of the combination would be predictable.

As per claim 10, arguments made in rejecting claim 3 are analogous to arguments for rejecting claim 10.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5982473 (Miura), USPN 5547061 (Itako (USPN)), and JPN 02002163700 (Itako (JPN)) as applied to claim 3 above, and further in view of USPN 5126856 (Abe).

As per claim 4, arguments made in rejecting claim 3 are analogous to arguments for rejecting claim 4. Miura in view Itako (USPN)) and Itako (JPN)) does not teach judges that the unwanted image exists.

Abe teaches judges that the unwanted image exists (**Abe: abstract: "a determiner for determining whether a scanner, such as the irradiation light and the photoelectric**

Art Unit: 2624

transformer is functioning properly according to a density level recognized from the digital image signal”; col 3, lines 3-14: “detect whether the condition of an image reading means is good or not according to the level of a plurality of digital color signals”; col 9, lines 49-67; Figs. 12 and 16).

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the teachings of Abe into Miura since Miura suggests a document imaging and judging system in general and Abe suggests the beneficial use of a document imaging and judging system that judges that the unwanted image exists as to decide to stop copying (Abe: col 1, lines 31-35) in the analogous art of image processing.

As per claim 11, arguments made in rejecting claim 4 are analogous to arguments for rejecting claim 11.

Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5982473 (Miura) as applied to claim 1 above, and further in view of USPN 5655164 (Tsai).

As per claim 7, Miura teaches the sheet paper identification apparatus according to Claim 1. Miura does not teach wherein the image acquisition means acquires a transparent image in a watermark region in which a watermark pattern of the sheet

paper exists, and the imaging condition adjusting means adjusts a condition for imaging the transparent image.

Tsai teaches the image acquisition means acquires a transparent image in a watermark region in which a watermark pattern of the sheet paper exists, and the imaging condition adjusting means adjusts a condition for imaging the transparent image (**Tsai: abstract: "A system for incorporating electronic signals representative of at least audio information into still film slides and photographs"; col 1, lines 9-23; col 1, line 42 – col 2, line 25: "Possible positions for the Data Strip may be the cardboard (or plastic) slide mount of a slide; the back surface of a print; or, for a Polaroid print, either the rear surface, or else the basal margin on the face of the Polaroid print. Whereas the term "Strip" is being used to refer to one form of a data storage means used by some embodiments for storing electronic signals representative of at least audio information, it is not a requirement for such storage means to appear in the geometric form of a strip... While the Data Strip typically may be used to retain electronic data representative of audio information, it may also be used to store control codes, for instance, used to control exposure settings on a camera, or to control the operation of a projector... Another technique, and certainly not the final one, involves storing the electronic signals on the photographic emulsion using optically encoded variations in light intensity. With this option, auxiliary data retention means, such as data strips and patches, may not be required"; Figs. 1-9 and 12-17).**

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the teachings of Tsai into Miura since Miura suggests a document imaging and judging system in general and Tsai suggests the beneficial use of a document imaging and judging system that adjusts a condition for imaging the transparent image which contains auxiliary data as to "be capable of giving automated slide presentations, wherein the presentations are "directed" by control codes contained in the slides. Not only may the players (and projectors) themselves be controlled in this manner, but other devices to which the players are connected as well, such as computers, audio components, video components, other A/V presentation devices, etc" (Tsai: col 2, lines 47-67) in the analogous art of image processing.

As per claim 14, arguments made in rejecting claim 7 are analogous to arguments for rejecting claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Atiba Fitzpatrick whose telephone number is (571) 270-5255. The examiner can normally be reached on M-F 10:00am-6pm.

Art Unit: 2624

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571)272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Atiba Fitzpatrick

Patent Examiner

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624